

convened in Washington in September 1961 for a three day meeting, and this volume is the result of their deliberations.

If, as did most of us, you missed the meeting but would like to know what transpired, this book provides the answers. Published, ". . . in part as an experiment . . .," the book is a verbatim transcript of the proceedings, jests and all. The participants discussed, mostly through exchanges of fairly short statements or by questions and answers, computer instrumentation and applications in bio-medical problems, with heavy emphasis on the electrocardiogram as a data generator. There were evidently none of the usual formal presentations, but some of the statements run to several pages. At the other extreme, some of the answers consist of a single word or two. The result conveys some of the spirit in which the meeting was conducted and gives the reader some insight into the extent to which the experts agree or disagree on various topics. Judging from the discussion, it was a very stimulating meeting to those present. This mode of presentation makes for a more pleasant type of reading than does the more usual style, in that it is more like reading a play; the reader can visualize the setting and the interchanges and interruptions as they occurred, especially if the characters are familiar.

On the other hand, it is difficult to find out what conclusions were reached or to locate any definite technical facts. There is an eight-page index that seems to be accurate, but there are no illustrations and, with one questionable exception, there are no references to the literature. The organization of the discussion is of some help, as it flows from discussions of the electrocardiogram and methods of automating its recording and interpretation, to problems of tape recording, through discussions of computers, including analog-to-digital interfaces, cost and limitations of computers, ending with a more general discussion collected under the heading, "The Philosophies for Bio-Medical Computation."

This book can be recommended to those who are interested in general discussions of bio-medical electronic and computer applications and to those especially interested in applications to the analysis and interpretation of the electrocardiogram. However, for those who want a primer in computer applications, it will not be as useful as a number of other recent books, at least one with the same publisher (Mason and Bulgren, *Computer Applications in Medicine*, Springfield, Ill., Chas. C. Thomas, 1964).

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GENETICS TODAY. Proceedings of the XI International Congress of Genetics. The Hague, The Netherlands, September 1963. Vol. I, Abstracts. Edited by S. J. Geerts. New York, The Macmillan Co., 1963, 332 pp. \$15.00.

The 885 abstracts submitted to the 11th International Congress of Genetics have been segregated into 18 different categories and published, as is the custom, without further editorial intervention. All aspects of genetics appear to have been represented so that the agriculturist as well as the

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physician will find material of interest. Some of the abstracts merely express vague generalities, however, and, while others are more specific in their contents, the supporting data of necessity have been omitted. The volume, therefore, is of interest chiefly as an index of the activities and interests which those who submitted abstracts would like to have made known.

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INTRODUCTION TO HUMAN ANATOMY. By Carl C. Francis. Fourth Edition. St. Louis, The C. V. Mosby Company, 1964, 478 pages. \$6.75.

The task of writing synopses and condensed texts about the medical sciences is formidable indeed. With a vast amount of material to be presented in a brief and concise manner, the author often writes a book that is incomplete and confusing. One such book is the subject of this review. It is not thorough enough to be used by the student of medicine, and its condensed form makes it difficult to read.

This text employs the systems approach to anatomy. Introductory chapters include the body as a whole, surface anatomy, and cells and tissues. Chapters on the various systems are grouped according to common function, and throughout the book Dr. Francis stresses the correlation between anatomical structure and function. The omission of details can be justified in part if it lends greater clarity to the discussions. Unfortunately Dr. Francis' condensation only adds to the confusion. The chapter on the muscular system, for example, attempts to deal with muscle groups and common actions of the muscles. For this purpose specificity of origin, insertion, innervation, and blood supply is sacrificed, and the reader learns only the origin and insertion of a muscle as a member of a general group and learns almost nothing of the blood supply.

Each of the other systems is treated similarly. The author seems to want to present the reader with the general morphology of the systems without getting bogged down in details. It is because enough detail is not presented that the student is never really clear about the anatomy of any system.

The diagrams, so important to any anatomy text, are mediocre at best. They fit in with the general plan of the book—consideration of important anatomical detail without confusing details. Again muscles with similar function are grouped together in a manner that makes it difficult to see where the individual muscles are located. Blood and nerve supplies of the muscles cannot be seen in the diagrams.

The systems approach is carried too far in the diagrams. The muscles, blood vessels, and nerves are all depicted separately with no structures of one system adequately pictured in the diagrams of another so that the reader finds it impossible to get a clear idea of the relationships of the systems.

Thirteen color plates with six in transparent Trans-Vision have been added to this edition, but they contribute very little to the ease of learning. In summary this textbook is inadequate for most medical students. Its condensed form lacks clarity and confuses the student.

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